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| **INTRODUCTION TO PROGRAMMING IN C (IS-FEE-10061S)**  **WEEK 03** | | | |
| **First Name** | **Last Name** | **Date** | **Points** |
|  |  | **14.03.2024** |  |

**Comments:**

* complete the data in the table above
* paste the program codes in the marked places
* send the file by the end of the day on which the next class will take place

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| **Program no. 1** |
| The minimum dangerous value of alternating current flowing through the body for an extended period for a person is 0.03 A (30 mA). Write a program where the user inputs the current in amperes from the keyboard. The program should print information on whether the entered current value is safe or dangerous. |
| **Program code:** |
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| **Teacher's comments:** |
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| **Program no. 2** |
| Write a program that reads three integers and prints the value of the maximum number and the value of the minimum number. Here are examples of program execution:   |  |  |  | | --- | --- | --- | | **Number 1: 2**  **Number 2: 3**  **Number 3: 1**  **------------**  **Max: 3**  **Min: 1** | **Number 1: 2**  **Number 2: 3**  **Number 3: 3**  **------------**  **Max: 3**  **Min: 2** | **Number 1: 2**  **Number 2: 2**  **Number 3: 2**  **------------**  **Max: 2**  **Min: 2** | |
| **Program code:** |
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| **Teacher's comments:** |
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| **Program no. 3** |
| Write a program that reads **height** (in **cm**) and prints information about assigning a person to one of three groups:   * below 150 cm - short height; * from 150 cm to below 180 cm - medium height; * 180 cm and above - tall height.   Here are examples of program execution:   |  |  |  | | --- | --- | --- | | **Height: 171**  **-------------**  **Medium height** | **Height: 145**  **-------------**  **Short height** | **Height: 180**  **-------------**  **Tall height** | |
| **Program code:** |
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| **Teacher's comments:** |
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| **Program no. 4** | |
| The figure shows the graph of the trapezoidal impulse. Write a program that reads the value of time **t** and computes the corresponding voltage **u**.  Here are examples of program execution:   |  |  |  |  | | --- | --- | --- | --- | | **t [s]: 0.5**  **-----------**  **u [V]: 1.5** | **t [s]: 2**  **-----------**  **u [V]: 3** | **t [s]: 4.25**  **-----------**  **u [V]: 2.25** | **t [s]: 6**  **-----------**  **u [V]: 0** | |  |
| **Program code:** | |
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| **Teacher's comments:** | |
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| **Program no. 5** |
| Write a program that reads three numbers: the lower limit of a range, the upper limit of a range, and any number x. If the lower limit is greater than the upper one, the program should print an error message and exit. Otherwise, the program should provide information regarding the location of x in the range:   * x is within the range (but is not a limit of the range); * x is the upper limit of the range; * x is the lower limit of the range; * x is located below the range; * x is located above the range.   Here are examples of program execution:   |  |  | | --- | --- | | **Lower limit: 5**  **Upper limit: 8**  **Number x: 6**  **------------------**  **x is in the range** | **Lower limit: 9**  **Upper limit: 4**  **Number x: 3**  **------------------**  **Wrong limits!** | |
| **Program code:** |
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| **Teacher's comments:** |
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| **Program no. 6** |
| Write a program that reads the day of the week (as an integer number, assuming: 1 for Monday, 2 for Tuesday, 3 for Wednesday, etc.). The program should print the following text:   * "usual day" - for days from Monday to Friday; * "weekend" - for Saturday and Sunday; * "wrong day number" - for other values.   Use the **switch** statement. Here are examples of program execution:   |  |  |  | | --- | --- | --- | | **Day: 2**  **------------**  **usual day** | **Day: 7**  **------------**  **weekend** | **Day: 10**  **------------**  **wrong day number** | |
| **Program code:** |
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| **Teacher's comments:** |
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